DOCKET FILE COPY ORIGINAL

ANN BAVENDER*
ANNE GOODWIN CRUMP*
VINCENT J. CURTIS, JR.
RICHARD J. ESTEVEZ
PAUL J. FELDMAN
ERIC FISHMAN
RICHARD HILDRETH
FRANK R. JAZZO
ANDREW S. KERSTING*
KATHRYN A. KLEIMAN
EUGENE M. LAWSON, JR.
HARRY C. MARTIN
J. TODD METCALF*
GEORGE PETRUTSAS
LEONARD R. RAISH
JAMES P. RILEY
KATHLEEN VICTORY
HOWARD M. WEISS

* NOT ADMITTED IN VIRGINIA

FLETCHER, HEALD & HILDRETH, P.L.C.

ATTORNEYS AT LAW

11th FLOOR, 1300 NORTH 17th STREET

ROSSLYN, VIRGINIA 22209-3801

(703) 812-0400

TELECOPIER

(703) 812-0486

INTERNET

office@fhh-telcomlaw.com

FRANK U. FLETCHER
(1939-1985)
ROBERT L. HEALD
(1956-1983)
PAUL D.P. SPEARMAN
(1936-1962)
FRANK ROBERSON
(1936-1961)
RUSSELL ROWELL
(1948-1977)

RETIRED
EDWARD F. KENEHAN

CONSULTANT FOR INTERNATIONAL AND INTERGOVERNMENTAL AFFAIRS
SHELDON J. KRYS
U. S. AMBASSADOR (ret.)

OF COUNSEL
EDWARD A. CAINE*
JOHN JOSEPH SMITH*

WRITER'S DIRECT
0429

October 17, 1997

VIA HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. - Room 222
Washington, D.C. 20554

Re: Amendment of Part 90 of the Commission's Rules Concerning Private Land Mobile Radio Services
WT Docket No. 97-153

Dear Mr. Caton:

On behalf of Safety Warning Systems, L.C., we are filing an original and fourteen (14) copies of its Reply Comments in the above-referenced rulemaking proceeding.

Please communicate with us if you need further information.

Very truly yours,

FLETCHER, HEALD & HILDRETH, P.L.C.

George Petrutsas
Counsel for Safety Warning Systems, L.C.
Communications, Inc.

GP:cej
Enclosures

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	WT Docket No. 97-153
Commission's Rules Concerning	)	RM-8584
Private Land Mobile Radio	)	RM-8623
Services	)	RM-8680
	)	RM-8734

REPLY COMMENTS OF SAFETY WARNING SYSTEMS, L.C.

SAFETY WARNING SYSTEMS, L.C.

Janice Lee
Its President

OF COUNSEL:
Leonard Robert Raish
George Petrutsas
FLETCHER, HEALD & HILDRETH, PLC
1300 North 17th Street - 11th Floor
Rosslyn, Virginia 22209
(703) 812-0400

Date: October 17,1997

TABLE OF CONTENTS

SUMMARY

The Commission's proposal has been widely supported by, among others, representatives of public safety agencies, state transportation agencies, state legislators, safety consultants, individual safety professionals, as well as by industry representatives. The opposition to the Commission's proposal by the Department of Transportation ("DOT") and that of the International Association of Chiefs of Police ("IACP") and of the National Association of Governors Highway Safety Representatives ("NAGHSR") is not well founded. SWS respectfully submits that DOT, IACP and NAGHSR have erroneously focused on radar detectors, and have failed to recognize the benefits of the safety warning service the Commission has proposed to accommodate. The Commission's proposal would neither "legitimize" nor promote the use of radar detectors, as DOT and the other opponents fear. Moreover, the receivers designed to function with the safety warning system being developed by SWS will not have the circuitry required for the device to function as radar detectors.

Substantial progress has been made in recent years in developing and testing the technology for the safety warning service involved in this proceeding. The results are very promising. Much of the research is being conducted under a congressional-mandated study contracted for and overseen by the Federal Highway Administration, a DOT agency. SWS respectfully submits that the Commission's proposal will increase traffic safety by providing local governments with a new, technologically advanced yet economical means for alerting motorists to hazardous driving conditions. Therefore, its adoption will be in the public interest.

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	WT Docket No. 97-153
Commission's Rules Concerning	)	RM-8584
Private Land Mobile Radio	)	RM-8623
Services	)	RM-8680
	)	RM-8734

REPLY COMMENTS OF SAFETY WARNING SYSTEMS, L.C.

I. Introduction

Safety Warning Systems, L.C. ("SWS"), files its Reply Comments in the above-captioned proceeding. As noted in its Comments, SWS is interested in and it is commenting on the Commission's proposal discussed under the heading, RM-8734, Safety Alerting Signals at 24 GHz, in Paragraphs 8-12 of the Notice of Proposed Rulemaking ("NPRM"). In Paragraph 11 of the NPRM, the Commission has proposed to amend Part 90 of its Rules governing the Public Safety Radio Services and the Radiolocation Service to permit the operation of radio transmitters at fixed locations and in emergency vehicles that would transmit on the frequency 24.10 GHz of the radar band 24.05-24.25 GHz an unmodulated continuous wave (NON emission, a radar signal), as well as modulated FM digital signals for the purpose of alerting motorists to hazardous driving conditions. SWS is the developer of the safety warning system proposed in the above-referenced RM-8437 on which the

Commission's proposal is substantially based. Therefore, SWS is vitally interested in the proposal. In its Comments in the proceeding, SWS supported the Commission's proposal and urged the Commission to adopt it with minor changes. A large number of others who filed comments also supported the proposal.[1] Three commenters, the U.S. Department of Transportation ("DOT"), the National Association of Governor's Highway Safety Representatives ("NAGHRS"), and the International Association of Chiefs of Police ("IACP") opposed the Commission's proposal. SWS respectfully submits that the arguments presented in opposition to the Commission's proposal do not require nor warrant rejection of the proposal. Briefly, SWS believes that a number of points raised in DOT's Comments, which were echoed in IACP's and NAGHRS' Comments, are not well taken and have been made moot by the significant progress in research, standardization and market development associated with the

---

[1]Comments in support of the Commission's proposal have been filed by: The International Municipal Signal Association (IMSA) jointly with the International Association of Fire Chiefs ("IAFC"); Agency for Transportation of the State of Vermont; Vermont Railway, Inc.; The Cumberland Gap Tunnel Authority, Broward County, FL; Nebraska State Senator Douglas A. Kristensen, as the Chairperson of the Nebraska Legislature's Committee on Transportation; MPH Industries, Inc.; Cybortech, Inc.; Sanyo Technica USA, Inc.; Risk Probe, Inc., a safety consultant; Mr. John Tomerlin, a highway safety consultant; David B. Sloan, Esquire; Mr. Dale T. Smith, an Engineer; and Lt. Giffen B. Nickol, a member of the Baltimore City Fire Department, speaking on his own behalf. Comments filed by Teligent, L.L.C., were directed primarily to the Commission's proposal to permit traffic light control on the frequency band 24.20-24.25 GHz.

Important support for the Commission's proposal also came from Senator John F. Kerry of Massachusetts, and from former Congressman Gene Snyder who, while in the Congress, sponsored a demonstration project, which employed "drone" radar transmitters along a dangerous section of Interstate 75 in Northern Kentucky. On the basis of that successful project, former Congressman Snyder offered his "strong support" for the Commission's proposal.

SWS technology during the brief period since the original petition RM-8734, was filed. SWS respectfully submits that DOT's comments erroneously focus on what it believes will be "the widespread employment of a device whose primary use is to facilitate unlawful speeds without detection"[2] rather than on the Commission's proposal which looks towards accommodating the safety warning system technology.

SWS is a corporation formed, in part, by members of the Radio Association Defending Airwave Rights ("RADAR"), the original petitioner for this rulemaking to perfect and bring to market the Safety Warning System motorist alert device. SWS was incorporated on April 17, 1996, some six months after RADAR filed its petition for rulemaking with the Commission and is the entity responsible for developing and standardizing specifications for the Safety Warning System, the marketing of fixed and mobile compatible transmitters, the licensing of receivers, and the development of this young, international industry.

II. Reply Comments

DOT, IACP and NAGHRS argue that the Commission's proposal to permit the transmission of safety warning signals on the frequency 24.10 GHz in the radar band 24.05-24.25.25 GHz is not likely to enhance safety, primarily for the following reasons. First, they suggest that local governments would not deploy the proposed safety warning systems because of the strong antipathy of many police entities towards radar detectors. They also suggest that adoption of the proposal would promote greater deployment of detectors, and NAGHSR and IACP argue that the

---

[2]DOT Comments, p. 2.

proposal would tend to "legitimize" the use of the radar detectors. DOT also expresses concern that the proposed safety warning systems may subject police speed enforcement to interference.

SWS respectfully submits that these arguments miss the point. They focus almost entirely on radar detectors while the Commission's proposal is concerned with the development of a safety warning system which initially would take advantage of the existence of some 20 million radar detectors in the hands of the motoring public but would neither legitimize nor promote their proliferation.

The proposed safety warning system is a new-generation Intelligent Transportation System ("ITS") technology designed to provide highway and transportation system authorities with the ability to communicate with motorists in a timely, accurate fashion, never before available. The system uses fixed and mobile transmitters to activate audio devices and liquid crystal displays incorporated into the portable receiver typically mounted in a motor vehicle in full view of its driver. Future applications include permanent factory-level OEM and after-market installation of the receiver into new motor vehicles.

Using the technology, public safety, highway, and transportation system authorities can send an unlimited amount of information to motorists in real-time, advising them as they approach an accident site, for example, or warning them as they near an area of reduced visibility, and suggesting an alternate route or providing other information.

The safety warning system is one of many ITS-related technologies currently being developed and tested with the promise of reducing highway congestion and delay while enhancing safety.[3] However, because this system is based in part on existing products, existing spectrum allocation, and existing vehicle installation methods, it is much farther along the path to widespread acceptance by motorists than other technologies and has no direct competition, either in the current research environment nor in the marketplace.

Some of the features designed into the system include:

- Transmitted information can consist of any one of 64 messages built into the receiver, a custom message programmed at the transmitter site or at a remote "control room" location, or any combination.

- Using an industry-standard RS-232 interface, the safety warning transmitter also can be configured to transmit a specific message when external equipment (traffic counters, visibility sensors, etc.) reach a specified threshold.

- The transmitter is small enough to be placed unobtrusively on emergency vehicles and activated only when that vehicle is engaged in an urgent response or as determined by its operator.

---

[3]See, *Executive Summary*, National ITS System Architecture, Intelligent Transportation Society of America, 400 Virginia Avenue, S.W., Suite 800, Washington, DC 20024-2730.

Clearly, there is a strong, growing need for ITS technologies and their seamless, timely integration into emerging surface transportation systems around the country. Many of these technologies, however, require development and installation of a sophisticated infrastructure not yet widely available nor in widespread use. Similarly, state departments of transportation, public-private roadway authorities and other entities responsible for developing and maintaining public thoroughfares lack the financial resources required to install the infrastructure and consequently realize the benefits of these competing technologies require in a timely fashion.

The safety warning system is designed to overcome this shortcoming in current ITS strategies yet it can be incorporated into and participate fully with them when they become more widely available. The system can function as a stand-alone device independent of the need for direct monitoring or activation and, using its RS-232 interface, can also be connected into the rudimentary architecture currently or soon to be installed in some metropolitan areas as well as ITS technologies expected in the longer term.

As such, the safety warning system represents a unique opportunity to provide the benefits of ITS, today, without the associated developmental delays. It also provides ITS advocates and planners with an early solution to the dilemmas presented by comparing the promises of these technologies with the reality that their supporting infrastructure does not now exist. Since the safety warning system is ready now, the promises of ITS can be realized by motorists today without the delays and costs associated with other technologies.

The Commission's proposal does not involve allocation of scarce spectrum to the detriment of one or more existing or developing industries or applicants. Nor does the instant proposal pose questions associated with the use of unmanned, "drone" transmitters to which the DOT Comments refer. Those issues have been considered and disposed of by Commission long ago. Finally, the Commission's proposal does not raise issues associated with the use of radar detectors in motor vehicles or whether such devices are used, as DOT states, "to exceed the speed limits on the nation's roadways."[4] Instead, the action being considered is the approval by the Commission of a somewhat greater signal strength than that permitted under Part 15 of its Rules within an existing spectrum allocation, which will allow the safety warning system to better achieve its promise by allowing longer-range, higher-quality reception of its signal.

Since the filing of RADAR's petition to the Commission on October 24, 1995, the industry has made substantial progress in developing the safety warning system technology and conducting real-world research on its value, dependability and potential to enhance highway safety in both urban and rural settings. Much of this research is being conducted by the Georgia Tech Research Institute ("GTRI"), a unit of the Georgia Institute of "Technology, and the Georgia Department of Transportation under a Congressionally-mandated study contracted for by the Federal Highway Administration ("FHWA"), a permanent agency within DOT.[5] As presently

---

[4]DOT Comments, p. 5.

[5]U.S. Department of Transportation, Intelligent Transportation Systems (ITS) Projects Book, January 1997, page 93. DOT recognizes those studies in its

envisioned by GTRI, the ongoing preliminary research will not be complete until the end of 1997. Although no interim reports are available, Congressional interest in and support for the safety warning system technology continues unabated and a provision for a new study of the technology by FHWA -- as well as a dramatic increase in funding -- is incorporated into draft legislation now pending.[6] Thus, DOT's comments in opposition of the Commission's proposal are at odds with both Congressional interest and with activities ongoing within one of its own modal agencies.

As noted above, DOT bases its opposition to the rulemaking, in part, on the premise that adoption of the Commission's proposal would "subject police speed enforcement efforts to interference or otherwise effectively limit the areas in which enforcement can be implemented.[7] In fact, operation of the proposed system on the frequency 24.10 GHz would not result in any significant increased potential for interference to police radars. As noted on page 4 of SWS's initial Comments, extensive tests have demonstrated that the proposed safety warning system would be compatible with and would not interfere with properly operated police radars. See, Supplementary Comments and Attachment A, filed by RADAR in support to its Petition for Rulemaking, RM-8734. Moreover, the proposed safety warning system would not be incompatible with the operations of LMDS systems to be operated in the upper 24 GHz band. While, as noted, Teligent has raised concerns about the

---

Comments - See DOT Comments, p. 3, footnote 6.

[6]Section 632(b)(2) of H.R. 2400, 105th Congress, as introduced.

[7]DOT Comments, p. 3.

interference potential of the traffic light control system the Commission has proposed for operation in the 24.20-24.25 GHz, Teligent has stated that "We have no objection . . . to the proposed operation of the motorist alert signals at 24.10 GHz . . ." See, Teligent Comments, page 3, footnote 4.

DOT also notes that its regulations do not allow radar detectors in commercial vehicles and, therefore, the proposed warning systems would not be available to drivers of commercial vehicles. Commercial vehicles comprise a very large and very important segment of highway users, who would not benefit directly from the operation of the proposed safety warning system. SWS does not believe, however, that this is a sufficient reason for rejecting the Commission's proposal. The solution to the problem, in SWS's view, is not to scuttle the entire program but perhaps a review by DOT of its regulations in light of technological developments, including the development of new receivers that would only detect safety warning messages.

Further, DOT's comments make reference to[8] but ignore the result of studies of motorist behavior in the presence of "drone" transmitters, wherein such devices were shown to reduce average speeds on targeted highway segments.[9] These studies demonstrated that activation of a radar detector by a drone transmitter caused motorists to reduce speed and become more aware of the traffic situation around them. In essence, the presence of a safety warning transmitter would also reduce

---

[8]DOT Comments, p. 2, footnote 4.

[9]See, Comment, filed by former Congressman Gene Snyder, p. 1.

average speeds on that highway segment, eliminating the need for police traffic radar and mitigating against DOT's concerns.

DOT opposition to the Commission's proposal is largely based on its assumption that the safety warning system receivers are basically radar detectors. While that is true for early-generation safety warning system receivers -- which are already in use by consumers -- current and future products will not incorporate the circuitry required for the device to function as a radar detector. This fact mitigates against "the antipathy [local safety authorities] have expressed for radar detectors.[10]

Further to the point of law enforcement's support or opposition to the petition, SWS notes that the Commission has received many more comments in support than it has in opposition.[11] Among the commenters supporting the petition are representatives of the public safety community, state agencies and representatives of state legislations, highway safety consultants and transportation agencies.[12]

---

[10]DOT Comments, p. 3. Nevertheless, the safety warning system would initially take advantage of the 20 million plus radar detectors now in the hands of the motoring public, (See, MPH Industries Comments, p. 2) and, while there are obviously differing views concerning their legitimacy and purpose for which that equipment is now used, they can, and SWS submits, should be used as an effective vehicle for communicating with motorists. It makes obvious good sense not to ignore the fact that the 20 million plus radar receivers are now in the hands of the American motoring public which can be used to receive the benefits of safety warning messages.

[11]See footnote 1 for a list of supporting Comments.

[12]See, for example, the joint Comments of the International Municipal Signal Association ("IMSA") and the International Association of Fire Chiefs ("IAFC") which "enthusiastically" support the Commission's proposal because ". . . all relevant factors argue in favor of the proposed amendment of the Commission's Rules", IMSA

> of us avoid accidents, injuries and unnecessary deaths, and it does so with technology that is affordable and readily available.

See, Letter of Gene Snyder to William Caton, dated September 22, 1997 referring to WT Docket No. 97-153.

Finally, the DOT takes the opportunity to remind the Commission of its support for Dedicated Short-Range Communications ("DSRC") technologies, in part because of the latter technology's two-way communications capability. Such technology is the subject of another pending petition before the Commission, RM-9096, which seeks the allocation of new spectrum.

In response, SWS simply notes that the instant proposal does not require the Commission to allocate additional spectrum or balance the needs of users of one class of service against others. SWS also notes that, despite ongoing research into the safety warning technology's potential, it is a technology, product and service which is already for the market, lacking only additional RF power to realize its potential to enhance highway safety. By contrast, many "competing" technologies -- including those associated with DSCR -- remain in their developmental stage. In fact, the current "largest installed base of DSRC systems are in electronic toll collection (ETC) systems,"[13] raising the issue of whether future DSRC technologies can provide motorists with the same services already available through the safety warning system. Although it would seem to be in competition with DSRC technologies, the safety warning system is designed to operate at a completely different part of the radio spectrum than that contemplated by RM-9096.

---

[13]62 Federal Register 791, January 6, 1997; Federal Highway Administration Notice and Request For Comments, "Achieving Interoperability With Dedicated Short Range Communication."

Footnote 12 cont.

& IAFC Comments, pp. 4-5. See also the Comments of the Agency for Transportation of the State of Vermont, which is testing in a limited way the use of the SWS, noting that adoption of the Commission's proposal would tend to "assure the safety of my workers." The Cumberland Gap Tunnel Authority also supported the Commission's proposal because it would benefit the public by alerting motorists to "inclement weather, traffic accidents, construction jams, etc." Interestingly, the Tunnel Authority believes that the safety warning transmitter would help the Authority in segregating and guiding through the tunnels vehicles carrying hazardous material. See CGTA Comments, p. 9. Probe Inc., a firm that provides safety loss control services to local governments and considers itself qualified to evaluate the potential benefits of the safety systems, also supported the Commission's proposal stating:

> "In our opinion, many of the tragedies that occur when our dedicated public servants are trying to promptly respond to emergencies or are working in vulnerable circumstances could be avoided given widespread installation of safety warning transmitters and receivers." Probe Inc. Comments, p. 1.

Finally, Mr. Giffen B. Nichol, a professional firefighter, employed by the Baltimore City Fire Department as a lieutenant assigned to an engine company, commenting as an individual not for his Department, summarized the views of public safety professionals as follows:

> "For many years, I and others in my profession have wished there was some way to warn motorists of approaching emergency vehicles, far enough in advance that they could take appropriate safe action. Existing warning systems, by themselves, are insufficient. Our emergency lights must be seen to be detected, and our audible warnings -- either a mechanical or electronic siren and airhorns -- cannot penetrate the well-insulated interior of many modern automobiles until we are in very close proximity. In an age of serenely quiet auto interiors and high-powered stereos, we are using the same audible warning devices we have been using for more than fifty years.
>
> The Safety Warning System (SWS) represents a new and innovative approach to this problem. Millions of American motorists, myself included, use radar detectors in their automobiles. With the SWS, those radar detectors can now serve to warn of the approach of an emergency vehicle, and provide the

Additionally, state and local elected officials from several states have expressed their support for the Commission's proposal and the safety warning technology's promise to enhance highway safety. As former Congressman Gene Snyder points out:

> ". . . the technology now exists to take a giant leap forward from the capabilities of drone radar. With the specific, advance warning provided by the system's transmitters, a driver is able to make informed decisions about nearby hazards and special traffic conditions. I am told that well over one million motorists already have purchased the new generation of radar detectors incorporating this technology, signaling that the driving public favors this important safety advance, even though transmitter placements are lagging behind pending FCC action on RM-8734.
>
> The Commission's timely approval of this petition will hasten the day when Safety Warning transmitters are routinely found on emergency vehicles, school buses, trains and highway maintenance equipment, as well as at road construction sites, dangerous intersections and other potentially hazardous locations. The technology is versatile, expandable and limited only by our imaginations. I firmly believe that when fully implemented the Safety Warning System will be every bit as important as seat belts and other mandatory safety equipment. In fact, I can see the day when a Safety Warning receiver will be found in each and every motor vehicle.
>
> Quick access to information is becoming increasingly important to all of us, and it should be no different when we are at the wheel of a car or

---

Footnote 12 cont.

> driver with enough time to react appropriately and safely. The SWS, in my considered opinion, clearly has the potential to save lives, both by preventing collisions between emergency and civilian vehicles, and by enabling emergency vehicles to reach their destinations quicker.
>
> Your approval of RM-8734 will speed the development and implementation of the Safety Warning System, thereby greatly enhancing the safety both of American motorists, and the public safety professionals who are sworn to protect them . . .".

Conclusion

Adoption of the Commission's proposal would neither "legitimize" nor promote increased use of radar detectors as such. It is emphasized that receiving equipment being developed for use in SWS's safety warning system is not capable of functioning as police radar detectors. Instead, the Commission's proposal will allow the safety warning technology to achieve its objectives to enhance highway safety. It would provide local public safety agencies with an important, technologically advanced means for promoting road safety effectively and economically, and without the allocation of new radio spectrum. The public interest would be served. Therefore, SWS urges the Commission to adopt its proposal.

Respectfully submitted.

SAFETY WARNING SYSTEMS, L.C.

By: Janice Lee GP
Janice Lee
Its President

OF COUNSEL:
Leonard Robert Raish
George Petrutsas
FLETCHER, HEALD & HILDRETH, PLC
1300 North 17th Street - 11th Floor
Rosslyn, Virginia 22209
(703) 812-0400

Date: October 17,1997

cej/gp/gp#7/radar3.plead